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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/824,716 | 04/04/2001 | Thomas Schutz | Q63690 | 1759 |

7590 03/30/2004

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3213

EXAMINER

NGUYEN, THUAN T

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2685

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/824,716

Applicant(s)

SCHUTZ ET AL.

Examiner

THUAN T. NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Pelin et al. (U.S. Patent No. 5,937,014).

Regarding claims 1 and 6, Pelin discloses a receiver (Fig. 1 for a base station telecommunication receiver) and its “method of combining at least two received signals of a telecommunication system” (Fig. 1 shows a base communication system with two antennas 170 and 180 connected to two transceivers 150 & 160 for receiving/transmitting at least two signals), “wherein a first combining algorithm is processed for providing a resulting signal, characterized in that a second combining algorithm is processed for providing a second resulting signal, and that the two resulting signals are combined , wherein the combination is depending on the two resulting signals”, i.e., a conventional spatial and temporal diversity technique shows that a first combining algorithm DWILSP 910 and another second combining algorithm DWILSP 910 is combined at temporal combining 920 in providing the resulting output of the two resulting signals from Ts 900

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as receiving signals at Received Input (Fig. 9, and col. 2/lines 22-40, and col. 10/line 50 to col. 11/line 29).

As for claim 2, Pelin discloses that the quality of the two resulting signals is estimated (col. 2/lines 22-40 as the quality of transmitted signals taken into accounts for DWILSP algorithm to evaluate).

As for claim 3, Pelin further teaches that “the estimated quality of the two resulting signals is used to weight the combination of the two resulting signals” (col. 2/lines 22-40 as the decoupled weighted least squares with projections (DWILSP) algorithm and the iterative least squares with projections (ILSP) algorithm is used for weighting the combination of the resulting signals (col. 2/lines 22-40 for conventional technique and as well as disclosed in Fig. 11, col. 13/line 54 to col. 14/line 33).

As for claim 4, Pelin discloses “wherein one of the two algorithm is a temporal reference algorithm and the other one of the two algorithm is a spatial reference algorithm” (col. 11/lines 2-28 as spatial and temporal algorithm is used).

As for claim 5, Pelin further discloses “wherein more than two algorithms is used”, i.e., a plurality of algorithms is used (Figs. 9-11, and col. 5/line 30 to col. 7/line 19 for a conventional technique for N algorithms as for N blocks of DWILSP).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Pelin et al. (US Patent 6,148,023) disclose a related system for spatial and temporal diversity technique. Fuhl et al. (US Patents 6,345,075 B1 & 6,094,167) and Benveniste (US Patent 5,809,423) disclose systems with similar diversity technique.

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4. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9306, (for Technology Center 2600 only)

*Hand-delivered responses should be brought to Crystal Park II,
2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (703) 308-5860. The examiner can normally be reached on Monday-Friday from 9:30 AM to 7:00 PM, with alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.



TONY T. NGUYEN
PATENT EXAMINER, FSA

Tony T. Nguyen
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March 18, 2004